Society for Developmental Biology President's View on Teaching Evolution and "Academic Freedom" in Science Education

Eric Wieschaus, Ph.D., SDB President, Princeton University Professor, Howard Hughes Medical Institutes Investigator, 1995 Nobel Laureate in Physiology or Medicine

In the past years, SDB has enthusiastically supported the efforts by the National Center for Science Education to work with local school boards and state curriculum committees to establish rigorous, scientifically validated standards for teaching evolution. This effort has been largely successful, such as in the high profile cases in Pennsylvania, Kansas and Ohio. In response to these successes, opponents of evolution have recently adopted a strategy based on "academic freedom" to allow individual teachers to introduce intelligent design in science classes. Legislation of this kind is under consideration in Florida and Louisiana, and its progress is being closely watched in other states.

I see this as an educational issue that has very little to do with academic freedom. The way science is taught in the classroom should mirror as closely as possible the way science is done by scientists. Science is a group effort -- we collect evidence to convince our fellow scientists as well as ourselves. The issue of academic freedom is misleading. All of our published science is vetted and reviewed by our peers. None of us can publish papers, obtain funding or have our research presented in textbooks until the research has been examined and criticized by fellow scientists.

I do not see why it should be different for middle school or high school science teachers. What is publicly taught as science in the schools should be decided by the science and educational community as a whole - in school boards, in panels of scientists and educators. The science standards by this effort would be severely undermined, however, if the states pass the proposed "academic freedom" legislation.

When an individual high school teacher presents his or her personal views as science, it is not an issue of "academic freedom". What we teach in the classroom must be based on evidence **and** on the consensus that arises following debate in the scientific community. I do not think that public science teaching should be based on an individual teacher's views on whether HIV causes AIDS, whether DNA is the genetic material, whether evolution accounts for species diversity, or whether Darwinian natural selection is mathematically feasible. There is no significant controversy on these issues in scientific community.

Science plays an essential role in society. There are many issues whose resolution depends on public understanding and appreciation of real science. Our job as scientists is not only to educate

the public on the facts of science, but also on the scientific process itself. It is my hope that SDB and its members will continue to be active in this effort.

Eric Wieschaus

NOTE: This statement is endorsed by the SDB Board of Directors

Resources:
The National Academies - http://nationalacademies.org/evolution/
National Center for Science Education - http://www.natcenscied.org/
Federation of American Societies for Experimental Biology - http://opa.faseb.org/pages/PolicyIssues/evolutionresources.htm
You say you want an evolution? A role for scientists in science education - An article by the Coalition of Scientific Societies, also published in SDB's official journal *Developmental Biology*, April 1, 2008 issue (doi:10.1016/j.ydbio.2008.01.021)

Contact:
Society for Developmental Biology - http://www.sdbonline.org
sdb@sdbonline.org